

AIRBORNE FIBER SAMPLING SHEET

Building Number: _____ Location: _____

Operating Description: _____

Pump Location: _____

CALIBRATION DATA

Pump No: _____ Sample Date: _____

PRE-CALIBRATION

Flow Rate	
1.)	_____
2.)	_____
3.)	_____
AVG	_____

POST-CALIBRATION

Flow Rate	
1.)	_____
2.)	_____
3.)	_____
AVG	_____

AVERAGE OR PRE/POST CALIBRATIONS: _____

SAMPLING DATA

Analyst: _____ Date of Reading: _____

Filter Size ☐ 25 mm ☐ 37mm

FILTER ID	TIME ON	TIME OFF	TIME (min)	VOLUME(L)

TOTAL FIBER/FIELD COUNT

	0	1	2	3	4
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

	5	6	7	8	9

Total Fiber Count: _____

Total Field Count: _____

MFA = 0.00785 mm²**ABBREVIATIONS AND FORMULAS:**

DL = Detection Limit in fibers/CC

V = Volume of Air Samples in Liters

FA = Effective Collection Area of Filter in mm²
(25 mm = 385 37 mm = 855)

MFA = Microscopic Field Area

CALCULATIONS:

Fibers/cc: _____

TWA: _____

DL: _____

$$\text{Fibers/cc} = \frac{(\text{Total Fibers Counted}) - (\text{Blank Fibers Counted})}{(\text{Total Fibers Counted}) - (\text{Blank Fields Counted})} \times (\text{Filter Area})$$

$$(1000) \times (\text{Flow Rate, 1pm}) \times (\text{Collection Time, min}) \times (\text{MFA})$$

$$DL = \frac{(10/100) \times (FA)}{(1000) \times (V) \times (MFA)}$$

$$F/\text{mm}^2 = \frac{(\text{Fibers-Blank})/(\text{Fields})}{(MFA)}$$

$$F/\text{cc} = \frac{(\text{Fibers/Fields})}{(\text{Volume})} \times 49.04$$

(for 25mm filter only)

$$TWA = C_1 T_1 + C_2 T_2 + C_n T_n$$